

Patent Claims

1. Process for the production of a sweetening salt according to the formula $\text{APMH}^+ \text{Ace}^-$, characterized in that aspartame or an aspartame derivative is reacted with acesulfamic acid in a solvent selected from one or several of the following solvents:
 - liquid SO_2 ,
 - halogenated aliphatic hydrocarbons,
 - carbonate esters with low, aliphatic alcohols,
 - nitroalkanes,
 - alkyl disubstituted pyridines,
 - aliphatic sulfones.
2. Process according to claim 1, characterized in that the aspartame derivative is a compound selected from: neotame, alitame as well as structural variants based on aspartame, neotame and alitame.
3. Process according to claim 1 or 2, characterized in that the concentration of acesulfamic acid in the reactive solution is between 0.3 wt. % and 50 wt. %.
4. Process according to one of the claims 1 to 3, characterized in that the stoichiometric ration of aspartame or the aspartame derivative to the acesulfamic acid is 1:1.
5. Process according to one of the claims 1 to 4, characterized in that the stoichiometric ratio of aspartame or the aspartame derivative to acesulfamic acid is between 0.005:99.995 and 99.995:0.005.
6. Process according to one of the claims 1 to 5, characterized in that the reaction is carried out in a range of temperature of between -95°C to $+126^\circ\text{C}$.
7. Process according to one of the claims 1 to 6, characterized in that the sweetening salt is recrystallized.

8. Process according to claim 7, characterized in that the recrystallization is carried out in a solvent mixture.
9. Process according to claim 7 or 8, characterized in that the solvent mixture contains two or several of the solvents selected from water, acetone and C₁-C₄ alcohol.
10. Process according to one of claims 7 to 9, characterized in that the solvent mixture consists of water and acetone.
11. Process according to one of the claims 7 to 10, characterized in that the recrystallization is carried out at a temperature of -35°C to +30°C.
12. Sweetening salt, consisting of the two sweetener components aspartame cation and acesulfame anion, characterized in that the decomposition of the salt is smaller than 0.005 wt. % diketopiperazine (DKP), if the salt is heated for 240 min at 120°C, or if it is heated at 130°C for 60 min.
13. Salt according to claim 12, characterized in that it features a potassium content less than 50 ppm.
14. Use of sweetening salt APMH⁺Ace⁻ in food, beverages, pharmaceuticals and cosmetics.

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7. Process according to one of the claims 1 to 6, characterized in that the sweetening salt is recrystallized.
8. Process according to claim 7, characterized in that the recrystallization is carried out in a solvent mixture.
9. Process according to claim 7 or 8, characterized in that the solvent mixture contains two or several of the solvents selected from water, acetone and C₁-C₄ alcohol.
10. Process according to one of claims 7 to 9, characterized in that the solvent mixture consists of water and acetone.
11. Process according to one of the claims 7 to 10, characterized in that the recrystallization is carried out at a temperature of -35°C to +30°C.
12. Sweetening salt, consisting of the two sweetener components aspartame cation and acesulfame anion, characterized in that the decomposition of the salt is smaller than 0.005 wt. % diketopiperazine (DKP), if the salt is heated for 240 min at 120°C, or if it is heated at 130°C for 60 min.
13. Salt according to claim 12, characterized in that it features a potassium content less than 50 ppm.
14. Use of sweetening salt APMH⁺Ace⁻ according to claim 12 in food, beverages, pharmaceuticals and cosmetics.
